STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0078921; AI 43470; PER20070001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Tangipahoa Parish Government
Tangipahoa Regional Solid Waste Facility
P. O. Box 215
Amite, LA 70422

II. **PREPARED BY:** Angela Marse

DATE PREPARED: March 25, 2008

III. **PERMIT ACTION:** revocation and reissuance of LPDES permit LA0078921, AI43470

LPDES application received: September 27, 2007

LPDES permit issued: January 1, 2005
LPDES permit expired: December 31, 2010*

* Although the permit does not expire until 2010, significant alterations are planned at the facility before the expiration of the permit. Rather than modify the permit only for it to be reissued soon after, the Department will revoke and reissue the current permit. This is in accordance with LAC 33:IX.3105.A and LAC 33:IX.2903 A.1.a. See Section IX. for discussion of alterations.

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated leachate, treated sanitary wastewater, treated equipment washwater, treated contact stormwater, and non-contact stormwater from a municipal solid waste landfill serving Tangipahoa Parish and the area within a 100-mile radius.

B. The facility is located at 57510 Hano Road in Independence, Tangipahoa Parish.

C. The treatment facility for leachate, contact stormwater, sanitary wastewater, and equipment washwater consists of an aerated lagoon. Non-contact stormwater is treated in a sedimentation basin. A flocculation agent is added if needed.

D. Outfall 101- from the oxidation pond

Discharge Location: Latitude 30°41'07" North
Longitude 90°33'35" West

Description: treated leachate, contact stormwater, sanitary wastewater, and equipment washwater

Estimated flow: 0.033 MGD

Type of Flow Measurement which the facility is currently using: engineering calculation

Outfall 001 – from the south sedimentation pond

Discharge Location: Latitude 30°41'05" North
Longitude 90°33'05" West

Description: non-contact stormwater from the south side of the facility and treated wastewater from outfall 101

Estimated flow: 0.076 MGD

Type of Flow Measurement which the facility is currently using: engineering calcualtion

Outfall 002- from the north sedimentation pond

Discharge Location: Latitude 30°41'16" North
Longitude 90°33'20" West

Description: non-contact stormwater from the north side of the facility

Estimated flow: 0.170 MGD

Type of Flow Measurement which the facility is currently using: engineering calculation

Outfall 003- from the borrow area pond

Discharge Location: Latitude 30°41'17" North
Longitude 90°33'17" West

Description: non-contact stormwater from the eastern borrow area (this includes non-contact stormwater and treated landfill wastewater from the westside of the facility

Estimated flow: 1.68 MGD

Type of Flow Measurement which the facility is currently using: engineering calculation

Outfall 301-before the borrow area pond

Discharge Location: Latitude 30°41'07" North
Longitude 90°33'11" West

Description: non-contact stormwater from the west side of the facility and treated landfill wastewater(outfall 001 and 002)

Estimated flow: 0.246 MGD

Type of Flow Measurement which the facility is currently using: engineering calculation

V. **RECEIVING WATERS:**

The discharge from outfall 001 and 002 is by pipe into the Natalbany River, thence into the Tickfaw River, thence into Lake Maurepas in segment 040503 of the Lake Ponchartrain Basin. The discharge from outfall 003 is by open ditch, thence into the Natalbany River, thence into the Tickfaw River, thence into Lake Maurepas in segment 040503 of the Lake Ponchartrain Basin. The discharge from 101 is by pipe into the south holding pond, thence into the Natalbany River, thence into the Tickfaw River, thence into Lake Maurepas in segment 040503 of the Lake Ponchartrain Basin. The discharge from outfall 301 is by pipe into the borrow area pond, thence into an open ditch, thence into the Natalbany River, thence into the Tickfaw River, thence into Lake Maurepas in segment 040503 of the Lake Ponchartrain Basin. Segment 040503 is listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the Natalbany River is 1.44 cfs.

The **hardness value** is 20.4 mg/l and the **fifteenth percentile value for TSS** is 8.6 mg/l.

The designated uses and degree of support for Segment 040503 of the Lake Ponchartrain Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Not Supported	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Fully Supported	Not Supported	N/A	N/A	N/A	N/A

[1/] The designated uses and degree of support for Segment 040503 of the Lake Ponchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303 of the Clean Water Act as amended by the Water Quality Act of 1987, and EPA's regulations at 40 CFR 130 require that each state identify those waters within its boundaries not meeting water quality standards. Segment 040503 of the Lake Pontchartrain Basin is on the 303(d) list of impaired waters. Section 303(d) of the Federal Clean Water Act further requires states to implement plans to address impairments. LDEQ is developing Total Maximum Daily Loadings Studies (TMDLs) to address impaired waterbodies. TMDL studies for the Lake Pontchartrain Basin are scheduled for completion in 2011. The suspected causes of impairment include organic enrichment/low DO, pathogen indicators, phosphorus, and mercury. (Impairments referenced in the previous permit were based on the 2002 Water Quality Management Plan and included lead, copper, cadmium, total dissolved solids, salinity, suspended solids, chlorides, or sulfates as impairments. The 2004 Water Quality Management Plan did not site these pollutants as impairments.)

This facility will have an intermittent discharge. Therefore, it is not likely that this discharge will have any significant impact on the receiving stream that will cause further impairment. Nonetheless, suspected causes of impairment have been addressed in the following manner.

Pathogen Indicators

To protect against potential receiving water impairments due to pathogens, fecal coliform limits have been established in the permit. Monitoring for fecal coliform is the best indicator for the potential presence of pathogenic organisms in wastewater.

Organic enrichement/ Low Dissolved Oxygen

Biochemical oxygen demand (or BOD) is the amount of oxygen required by bacteria to oxidize biologically degradable material (normally organic matter) found in wastewater, effluents and polluted waters. The test measures the amount of oxygen consumed by naturally occurring bacteria over a five-day period. Therefore, to protect against potential discharges resulting in DO levels below that of state water quality standards for the receiving waterbody, BOD_5 limits have been placed in the permit. Monitoring for BOD_5 is the best indicator by which to measure the potential discharge of oxygen consuming pollutants at levels that will result in dissolved oxygen below that of state water quality standards.

Phosphorus

Phosphorus is considered a nutrient. LDEQ's declaratory ruling (April 29, 1996) also states "Dissolved oxygen is a direct correlate with overall nutrient impact. This is a well-established biological and ecological principle. Thus, when the LDEQ maintains and protects dissolved oxygen, the LDEQ is in effect also limiting and controlling nutrient concentrations and impacts." Through the previously mentioned BOD_5 limit, LDEQ is also controlling nutrients like phosphorus.

Mercury

The source of mercury has been identified as atmospheric deposition. However, studies have shown the leachate generated at municipal solid waste landfills can be highly variable and may include the presence of priority pollutants. To protect against any further impairment a mercury reporting requirement has been added to all final outfalls. Data collected will help determine if the landfill is a contributor to the mercury impairment. Should analytical results or the TMDL for mercury determine a mercury effluent limitation is necessary; a reopener clause has been included in the draft permit.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040503 of the Lake Ponchartrain Basin, is listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS) as habitat for the *Gulf sturgeon* which is listed as an endangered species. LDEQ, as instructed by the FWLS in a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ), has sent this draft permit to the FWLS for review and consultation.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:
Local newspaper of general circulation
Office of Environmental Services Public Notice Mailing List

For additional information, contact:
Mrs. Angela Marse
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

As indicated in Section III. Permit Action, the LPDES permit for Tangipahoa Regional Solid Waste Facility is being revoked and reissued in accordance with LAC 33:IX.3105.A and LAC 33:IX.2903 A.1.a. to reflect upcoming changes at the facility.

The future landfill cell is expected to be partially located at the North Holding Pond. In order to adequately manage the stormwater at the site, the facility will modify the current stormwater management plan by diverting the stormwater from the north side of the landfill directly to the North Sedimentation Pond. Since the North Sedimentation Pond does not have the adequate capacity, a new pumping management system will be introduced. The pumping management system will consist of pumping the water from the North Sedimentation Pond to the South Holding Pond. The water will flow from the South Holding Pond to the South Sedimentation Pond as is currently being done. From the South Sedimentation Pond, the water will be pumped across the Natalbany River to the Borrow Area Pond (location of the new internal Outfall 301). The borrow area will accommodate the entire stormwater and treated wastewater volumes from the landfill and supporting areas. If, for an unexpected reason, the capacity of the system is exceeded, water discharging from the Borrow Area Pond will occur through Outfall 003.

Outfalls 001 and 002 will remain in the permit and may be utilized for discharge in case of technical difficulties with the pumping system. In case of heavy rainfall events when there is not adequate time for settlement in the Sedimentation Pond, a discharge may occur through Outfalls 001 and 002.

In the previous permit, outfall 201 served as a bypass outfall for periods of heavy rainfall when there was not adequate time for settlement in the North Sedimentation Pond. It drained the same area as outfall 002. No discharge has occurred from this outfall and the Facility has requested it be de-activated.

Final Effluent Limits:

OUTFALL 101

Discharge from Outfall 101 will remain as currently permitted.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
BOD_5	20 mg/l	30 mg/l	BPJ based on previous permit limits and water quality impairments.
TSS	35 mg/l	50 mg/l	BPJ based on previous permit limits and from previously issued water discharges permits for similar facilities/effluents.
Ammonia nitrogen	4.9 mg/l	10 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
Alpha Terpineol	0.016 mg/l	0.033 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.
Benzoic Acid	0.071 mg/l	0.12 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.
p-cresol	0.014 mg/l	0.025 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.
Zinc	0.11 mg/l	0.20 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.
Phenol	0.015 mg/l	0.026 mg/l	Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Landfills Point Source Category.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

3) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

4.) **Priority Pollutants – General Comments**

The treatment facility will be treating leachate, contact stormwater, sanitary wastewater and equipment washwater. Studies have shown the leachate generated at municipal solid waste landfills can be highly concentrated and variable, and may include the presence of priority pollutants. Contributing to this variability may be the presence of household hazardous waste in the municipal solid waste stream (EPA, 1987). Pollutants which may be found in leachate include volatile organic compounds, metals and pesticides.

This Office has established a list of priority pollutants with threshold limits intended as action levels. Should a substance exceed the level of the established concentration, the Department is to be notified, in writing, within five (5) days of exceedence and Tangipahoa Regional Solid Waste Facility shall institute a study to determine the source of the substance. Within sixty (60) days of the written notification the permittee shall submit a written account of the nature of the study, the study results, and measures being taken to secure abatement.

1. Draft Threshold Limits – The draft threshold limits are derived from either technology-based effluent limits or State Water Quality Standards and requirements. The most stringent of these limits is contained in the permit. Technology-based effluent limitations are based on the applicable effluent limitations guidelines, on Best Professional Judgment (BPJ) in the absence of applicable guidelines, or on a combination of these two methods. Currently, there are guidelines for the treatment of leachate from a municipal solid waste landfill and they have been included in the permit in addition to these threshold values. This office intends to employ technology-based effluent limitations taken from previously issued BPJ based water discharge permits for municipal solid waste landfills and other

land disposal facilities. Each of the guideline regulations were accompanied by a development document, which provided the support for the final guideline. A water quality screen was performed using receiving stream data for the Natalbany River. This screen was used to establish water quality based limits.

2. Derivation of Threshold Limits

LDEQ/EPA Technology-Based Limits – In the early 1980's the LDEQ and EPA developed effluent limitations for all of the priority pollutants contained in the EPA 2C application for land disposal facilities. Although the limitations were technology-based and derived prior to formal State water quality criteria, water quality considerations played a significant role in the development of the limits.

Priority Metals and Pesticides - The threshold limits established for metals and pesticides are water quality based in accordance with the state water quality criteria (Appendix B-1). Metals for which state criteria have not been promulgated, threshold limits have been established using technology-based effluent limits taken from water discharge permits previously issued to municipal solid waste landfills and other land disposal facilities. In accordance with the water quality standards, there may be no discharge of PCBs.

Chemical	DEQ/EPA Daily Max. ug/l	WQBL Daily Max. ug/l	Threshold Value ug/l	MQL Required ug/l
METALS, CYANIDE, AND TOTAL PHENOLS				
Total Antimony	600		600	60
Total Arsenic	100		100	10
Total Beryllium	100		100	5
Total Cadmium	100	62	62	1
Chromium III	100		100	
Chromium VI	100	60	60	10
Total Copper	500	44	44	10
Total Cyanide	100	174	100	20
Total Lead	150	110	110	5
Total Mercury	10	1.8	1.8	0.2
Total Nickel (freshwater)	500	3135	500	40
Total Selenium	100		100	5
Total Silver	100		100	2
Total Thallium	100		100	10
Total Zinc	1000	382	200 (EPA)**	20
Total Phenols	50	2661	50	5
VOLATILE COMPOUNDS				
Acrolein	100		100	50
Acrylonitrile	100		100	50
Benzene	100	5471	100	10
Bromodichloromethane	100	144	100	10
Bromoform	100	11139	100	10

Carbon Tetrachloride				
Chlorobenzene	100	525	100	10
Chloroethane	100		100	50
2-Chloroethyl vinyl ether	100		100	10
Chloroform	100		100	50
Dibromochloromethane	100		100	10
1,1-Dichloroethane	100	2223	100	10
1,2-Dichloroethane	100		100	10
1,1-Dichloroethylene (1,1-Dichloroethene)	100	2976	100	10
1,2-Dichloropropane	100	253	100	10
1,3-Dichloropropene (1,3-Dichloropropylene)	100		100	10
Ethylbenzene	100		100	10
Methyl Bromide (Bromomethane)	100		100	10
Methyl Chloride (Chloromethane)	100		100	50
Methylene Chloride	100		100	50
1,1,2,2,-Tetra-chloroethane	100		100	20
Tetrachloroethylene	100	787	100	10
1,2-*trans*-Dichloroethylene	100	1094	100	10
Toluene	100		100	10
1,2-*trans*-Dichloroethylene (1,2-dichloroethene)	100		100	
1,1,1-Trichloroethane	100		100	10
1,1,2-Trichloroethane	100		100	10
Trichloroethylene (Trichloroethene)	100	3020	100	10
Vinyl Chloride	100	9192	100	10
ACID COMPOUNDS	100	15670	100	10
2-Chlorophenol (*o*-Chlorophenol)				
2,4-Dichlorophenol	100		100	10
2,4-Dimethylphenol	100		100	10
2,4-Dinitrophenol	100		100	10
4,6-Dinitro-*o*-Cresol {4,6-Dinitro-*o*-phenol} {4,6-Dinitro-2-mehtyl phenol}	100		100	50
2-Nitrophenol	100		100	50

4-Nitrophenol	100		100	20
P-Chloro-M-Cresol	100		100	50
Pentachlorophenol	100		100	
Phenol	100		100	50
2,4,6-Trichlorophenol	100		100	10
PESTICIDES	100		100	10
Aldrin				
Chlordane	10	0.2	0.2	0.05
DDD	10	0.083	0.083	0.2
DDE	10	0.114	0.114	0.1
DDT	10	0.083	0.083	0.1
Dieldrin	10	0.048	0.048	0.1
Endosulfan	10	0.021	0.021	0.1
Endosulfan	10	0.056*	0.056*	0.1
Total Endosulfan	10	0.056*	0.056*	0.1
Endosulfan sulfate		0.83	0.83	0.1
Endrin	10		10	0.1
Endrin aldehyde	5	0.32	0.32	0.1
Heptachlor	10		10	0.1
Heptachlor Epoxide	10		10	0.05
Hexachlorocyclohexane – (BHC-)	10		10	0.05
Hexachlorocyclohexane – (BHC-)	10		10	0.05
Hexachlorocyclohexane – (BHC-)	10		10	0.05
Hexachlorocyclohexane – (Lindane)	10		10	0.05
Total PCB's	10	10.1	10	0.05
Toxaphene	No discharge			1.0
BASE/NEUTRAL COMPOUNDS	10	0.009	0.009	5.0
Acenaphthene				
Acenapthylene	100		100	10
Anthracene	100		100	10
Benzidene	100		100	10
Benzo(*a*)anthracene	100		100	50
3,4-Benzofluoranthene {Benzo(*b*)fluoranthene}	100		100	10
Benzo(*k*)fluoranthene	100		100	10
Benzo(*a*)pyrene	100		100	10
Benzo(*ghi*)perylene	100		100	10
Benzyl butyl Phthalate {Butyl benzyl Phthalate}	100		100	10

Bis(2-chloroethyl)ether	100		100	10
Bis(2-chlorocthoxy) methanc	100		100	10
Bis(2-ethylhexyl) Phthalate	100		100	10
Bis(2-chloroisopropyl) ether	100		100	10
4-Bromophenyl phenyl ether	100		100	10
2-Chloronaphthalene	100		100	10
4-Chlorophenyl phenyl ether	100		100	10
Chrysene	100		100	10
Dibenzo (*a,h*) anthracene	100		100	10
Di-*n*-Butyl Phthalate	100		100	20
1,2-Dichlorobenzene	100		100	10
1,3-Dichlorobenzene	100		100	10
1,4-Dichlorobenzene {p-Dichlorobenzidine}	100		100	10
3,3-Dichlorobenzidine	100		100	10
Diethyl Phthalate	100		100	50
Dimethyl Phthalate	100		100	10
2,6-Dinitrotoluene	100		100	10
2,4-Dinitrotoluene	100		100	10
Di-*n*-octyl Phthalate	100		100	10
1,2-Diphenylhydrazine	100		100	10
Fluoranthene	100		100	20
Fluorene	100		100	10
Hexachlorobenzene	100		100	10
Hexachlorobutadiene	100	.109	.109	10
Hexachlorocyclopentadiene	100	19.4	19.4	10
Hexachloroethane	100		100	10
Ideno (1,2,3-*cd*)pyrene	100		100	20
Isophorone	100		100	20
Naphthalene	100		100	10
Nitrobenzene	100		100	10
N-nitrosodimethylamine	100		100	10
N-nitrosodiphenylamine	100		100	50
N-nitrosodi-*n*-propylamine	100		100	20
Phenanthrene	100		100	20
Pyrene	100		100	10
1,2,4-Trichlorobenzene	100		100	10

* Chronic Value taken from the Water Quality Criteria Summary

** See Page 5 of this document, Effluent limit based on EPA Effluent Guidelines
Total Chromium has been removed from State Water Quality Standards and replaced with criteria for Chromium III and Chromium VI, reference to Total Chromium has been removed from the PPS tables.

A number of the threshold limitations established from the criteria are below EPA established minimum quanitification levels (MQL). The MQL is accepted as the lowest concentration at which a substance can be quantitatively measured. Where the permit limits are below the MQL the following is noted in the permit:

If any individual analytical test result is less than the minimum quantification level (MQL) listed above, a value of zero (0) may be used as the test result for those parameters for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

Final Effluent Limits:

OUTFALL 001

Effluent limits at 001 will remain the same with the exception of mercury and TDS. As per LAC 33:IX.1115.C.8 the limit established for TDS considering the mixing zone would be much higher than the standard and the values reported on DMRs required by the previous permit. Since TDS is no longer an impairment of Subsegment 040503, the reporting requirement has been removed from the permit. Mercury reporting will be required annually to determine if the Facility is contributing to the mercury impairment. A reopener clause has been included in the permit should an effluent limitation be necessary.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
Turbidity	---	35 NTU	BPJ based on previously issued permits.
Oil &Grease	---	15 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
TOC	---	50 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
Mercury	---	Report mg/l	BPJ based on receiving stream impairment.
Total Recoverable Iron	---	Report mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.

Other Effluent Limitations:

1) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

2) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

3) Toxicity Characteristics

Based on information contained in the permit application, LDEQ has determined there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream in violation of Section 101(a)(3) of the Clean Water Act. The State has established a narrative criteria which, in part, states that "No substances shall be present in the waters of the State or the sediments underlying said waters in quantities alone or in combination will be toxic to human, plant, or animal life..." (LAC 33:IX.113.B.3)

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testing performed in accordance with the LPDES Permit No. LA0078921, Part II, Section D for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Chronic static renewal 7-day survival & reproduction test Using Ceriodaphnia dubia (Method 1002.0)	1/quarter
Chronic static renewal 7-day survival & growth test Using fathead minnow (Pimephales promelas) (Method 1000.0)	1/quarter

Dilution Series – The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in toxicity tests. These additional concentrations shall be **3%, 4%, 5%, 7%, and 9%. The low-flow effluent concentration (critical low-flow dilution) is defined as 7% effluent.** The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in **Part II Section D** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in **Part II Section D** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or waterbody. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Final Effluent Limits:

OUTFALL 002

This area drains the north side of the property, including closed cells of the landfill. The area drained is approximately 60 acres. Only stormwater is discharged through this outfall. As stated previously, the facility is undergoing changes. A new pumping management system is being activated at the site. Water from the North Sedimentation Pond will be pumped to the South Sedimentation Pond. From there, it will go to the Borrow Area Pond. The Borrow Area Pond will be able to accommodate the entire stormwater and treated wastewater volumes. When the new pumping management system is installed, this outfall may be utilized for discharge in case of technical difficulties with the pumping system.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
Turbidity	---	35 NTU	BPJ based on previously issued permits.
Oil &Grease	---	15 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
TOC	---	50 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
Mercury	---	Report ug/l	BPJ based on receiving stream impairment.
Total Recoverable Iron	---	Report mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.

Other Effluent Limitations:

1) **pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

2) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Final Effluent Limits:

OUTFALL 301

This is a new internal outfall that will be created at the southwestern side of the Borrow Area Pond. Ultimately all stormwater and treated wastewater will be transferred to the Borrow Area Pond through this outfall. Because the facility does not anticipate discharging from outfall 003 frequently (if ever) biomonitoring will be required at this outfall.

Effluent Limitations:

1) **pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

2) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

3) **Toxicity Characteristics**

Based on information contained in the permit application, LDEQ has determined there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream in violation of Section 101(a)(3) of the Clean Water Act. The State has established a narrative criteria which, in part, states that "No substances shall be present in the waters of the State or the sediments underlying said waters in quantities alone or in combination will be toxic to human, plant, or animal life..." (LAC 33:IX.113.B.3)

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testing performed in accordance with the LPDES Permit No. LA0078921, Part II, Section D for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Chronic static renewal 7-day survival & reproduction test Using Ceriodaphnia dubia (Method 1002.0)	1/quarter
Chronic static renewal 7-day survival & growth test Using fathead minnow (Pimephales promelas) (Method 1000.0)	1/quarter

Dilution Series – The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in toxicity tests. These additional concentrations shall be **8%, 11%, 14%, 19%, and 26%. The low-flow effluent concentration (critical low-flow dilution) is defined as 19% effluent.** The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in **Part II Section D** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in **Part II Section D** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or waterbody. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Final Effluent Limits:

OUTFALL 003

This outfall drains the property owned by the Parish, east of the Natalbany River, and is approximately 360 acres. This area has been used by the Parish for borrow material. No waste disposal has occurred within this area. Stormwater has collected in the borrow area pond, but no discharge was observed for the previous two years for which DMRs were reviewed. This outfall will be utilized for discharge in case the capacity of the Borrow Area Pond is exceeded.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
Turbidity	---	35 NTU	BPJ based on previously issued permits.
Oil &Grease	---	15 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
TOC	---	50 mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.
Mercury	---	Report ug/l	BPJ based on receiving stream impairment.
Total Recoverable Iron	---	Report mg/l	Multisector General Permit – Sector L and previously issued water discharge permits for similar facilities/effluents.

Effluent Limitations:

1) **pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

2) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0078921: Issued: December 9, 2004
Effective: January 1, 2005
Expired: December 31, 2010

Outfall 101

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Daily Avg.	Daily Max.	Measurement	Sample
Flow	Report	Report	Daily	Estimate
BOD_5	20 mg/l	30 mg/l	1/month	Grab
TSS	35 mg/l	50 mg/l	1/month	Grab
Ammonia-Nitrogen	5 mg/l	10 mg/l	1/month	Grab
Fecal Coliform Colonies	200	400	1/month	Grab
pH	---	---	1/month	Grab
Pollutant Scan	---	---	1/month	Grab
Alpha Terpineol	0.016 mg/l	0.033 mg/l	1/quarter	Grab
Benzoic Acid	0.071 mg/l	0.12 mg/l	1/quarter	Grab
p-Cresol	0.014 mg/l	0.025 mg/l	1/quarter	Grab
Zinc	0.11 mg/l	0.20 mg/l	1/quarter	Grab
Phenol	0.015 mg/l	0.026 mg/l	1/quarter	Grab

Outfall 001

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Daily Avg.	Daily Max.	Measurement	Sample
Flow	Report	Report	Daily	Estimate
TOC	---	50 mg/l	1/month	Grab
Oil & grease	---	15 mg/l	1/month	Grab
Turbidity	---	35 NTU	1/month	Grab
TDS	---	Report mg/l	1/month	Grab
Total Recoverable Iron	---	Report mg/l	1/month	Grab
Sulfates	---	250 mg/l	1/month	Grab
Chlorides	---	250 mg/l	1/month	Grab
pH	---	---	1/month	Grab
Biomonitoring	---	---	1/quarter	Grab

Outfall 201

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Daily Avg.	Daily Max.	Measurement	Sample
Flow	Report	Report	Daily	Estimate
TOC	---	50 mg/l	1/month	Grab
Oil & grease	---	15 mg/l	1/month	Grab
TDS	---	Report mg/l	1/month	Grab
Turbidity	---	Report NTU	1/month	Grab
Total Recoverable Iron	---	Report mg/l	1/month	Grab
pH (standard units)	---	---	1/month	Grab

Outfall 002 and 003

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Daily Avg.	Daily Max.	Measurement	Sample
Flow	Report	Report	Daily	Estimate
TOC	---	50 mg/l	1/month	Grab
Oil & grease	---	15 mg/l	1/month	Grab
TDS	---	Report mg/l	1/month	Grab
Turbidity	---	Report NTU	1/month	Grab
Total Recoverable Iron	---	Report mg/l	1/month	Grab
pH (standard units)	---	---	1/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following most recent inspection performed for this facility.

Date – January 26, 2007
Inspector – Joseph Burris
Findings and/or Violations -

1. The facility was neat, clean, and well kept.
2. All paperwork was on site and up to date.
3. A DMR review showed 2 violations at Outfall 101 for the period of 3/1/2006 to 3/31/2006. The result for fecal coliform analysis was 423 col/100 ml. The limit is 400 col/100ml. The result for TSS was 143 mg/l. The limit is 50 mg/l.
4. On the DMR forms, the frequency of analysis, the sample type and unit of measurements were not completed correctly according to LAC 33:IX.2701L.4.
5. The effluent waters were clear, had no oily sheen or bad odor.

B) Compliance and/or Administrative Orders

A review of the files indicates no recent enforcement actions administered against this facility.

C) DMR Review

Discharge monitoring reports were reviewed for the period beginning January, 2006 through September, 2007.

Effluent Characteristic	Number of Violations
TSS - (concentration)	1
Fecal Coliform	1

* It should also be noted that the DMRs were not filled out correctly. The form did not have a box to mark "NO DISCHARGE" in the top right corner. Also, some parameters on the DMRs were not required to be reported in the permit. Some of the effluent limitations on the DMR forms were wrong. In some cases daily average and daily max limits for parameters with daily averages and daily maximums were included on the DMRs. Also, some monitoring frequencies on the DMRs were wrong. The permittee should compare the DMRs forms to the new permit and make the necessary changes in order for the DMRs to reflect the requirements of the permit.

** No priority pollutants were detected over the threshold limits.

XII. ADDITIONAL INFORMATION:

PERMIT REOPENER CLAUSE

In accordance with LAC 33:IX.2361.C.3, this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body. The LDEQ will be conducting TMDLs in the Lake Pontchartrain Basin Segment 040305. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to revoke and reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program", Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Tangipahoa Parish Government,Tangipahoa Regional Solid Waste Facility, September 27, 2007.

Outfall 101

	Flow		BOD		TSS		NH3N		Fecal		pH		A-terp	benz. Acid	p-cresol	zinc
	avg	max	avg	max	avg	max	avg	max	avg	max	avg	max				
DATE	report	report	20mg/l	30 mg/l	35	50	4.9	10	200	400	6	9				
Sep-07																
Aug-07																
Jul-07																
Jun-07																
May-07																
Apr-07																
Mar-07																
Feb-07																
Jan-07																
Dec-06	0.033	0.033		7		12		6.28	<DL	<DL	8.1	8.1	<DL	<DL	<DL	<DL
Nov-06																
Oct-06																
Sep-06	0.033	0.033		29		7		<DL	<DL	<DL	8.1	8.1	<DL	<DL	<DL	<DL
Aug-06																
Jul-06																
Jun-06																
May-06																
Apr-06																
Mar-06	0.033	0.033		<DL		143		78.8	432	432	7.58					
Feb-06																
Jan-06																

Outfall 001

	Flow		TOC	O/G	NH3N	Turbidity	NO2/NO3	TDS	Chlorides	Sulfates	Cr VI	Cyanide	Magnesiu	TRI	pH
	avg	max	max	max	*	NTU	*	max	max	max	*	*	*	*	
	report	report	50	15		35		report	250	250					
Date															
Sep-07	0.076	0.076	<4.49	<DL	<DL	5.26	<DL	252	<DL	14.5	<DL	<DL	<DL	<DL	7.96
Aug-07															
Jul-07															
Jun-07															
May-07															
Apr-07	0.076	0.076	4.65	<DL	<DL	3.08		228	31.6	29.1	<DL	<DL	<DL	<DL	6.69
Mar-07	0.076	0.076	6.14	<DL	<DL	5.74		140	37.8	16.5	<DL	<DL	<DL	<DL	7.65
Feb-07	0.076	0.076	4.11	<DL	<DL	31.2		132	31.2	17.4	<DL	<DL	<DL	<DL	7.41
Jan-07	0.076	0.076	4	<DL	<DL	9.83		195	32.7	9.95	<DL	<DL	<DL	<DL	7.8
Dec-06	0.076	0.076	4	<DL	<DL	5.75		180	55.2	13.8	<DL	<DL	<DL	<DL	7.3
Nov-06	0.076	0.076	1	<DL	<DL			335	31.8	9.7	<DL	<DL	<DL	<DL	7.3
Oct-06															
Sep-06															
Aug-06	0.076	0.076	6	<DL	<DL	9.62		135	56.3	10.8	<DL	<DL	<DL	0.02	7.9
Jul-06															
Jun-06															
May-06	0.076	0.076	7.4	<DL	<DL	14.1		158	58.7	10.5	<DL	<DL	<DL	0.32	7.9
Apr-06															
Mar-06	0.076	0.076	10.8	5.1	<DL	4.9		316			<DL	<DL	<DL	0.11	8.01
Feb-06															
Jan-06															

* not required by permit

Outfall 002

	Flow		TOC	TDS	O/G	Turbidity	pH	Fe
	avg	max	max	mg/l	mg/l	NTU	s.u.	mg/l
	report	report	50 mg/l	report	15 mg/l	report	6-9 s.u.	report
Date								
Sep-07	0.17	0.17	6.85	296	<DL	29	8.05	<DL
Aug-07	0.17	0.17	6.85	296	<DL	29	8.05	<DL
Jul-07	0.17	0.17	6.85	296	<DL	29	8.05	<DL
Jun-07	0.17	0.17	5.14	144	<DL	16.3	7.59	<DL
May-07	no discharge							
Apr-07	0.17	0.17	5.06	168	<DL	4.27	7.18	<DL
Mar-07	0.17	0.17	6.53	92	<DL	1.38	7.69	<DL
Feb-07	0.17	0.17	5.2	96	<DL	6.55	7.36	0.15
Jan-07	0.17	0.17	6	<DL	5.5	6.8	7.5	0.15
Dec-06	no discharge							
Nov-06	no discharge							
Oct-06	no discharge							
Sep-06	0.17	0.17	33	110	<DL	36	7.6	1.61
Aug-06	0.17	0.17	6	90	<DL	10.2	7.6	0.26
Jul-06	no discharge							
Jun-06	no discharge							
May-06	0.17	0.17	3.3	98	<DL	32.7	7.11	0.88
Apr-06	0.17	0.17	13.9	93	<DL	5.9	7.38	0.13
Mar-06	0.17	0.17	5.5	99	<DL	6.7	7.32	0.11
Feb-06	0.17	0.17	5.9	68	<DL	1.6	7.01	0.12
Jan-06	no discharge							

Outfall 003

	Flow		TOC	TDS	O/G	Turbidity	pH	Fe
	avg	max	max	mg/l	mg/l	NTU	s.u.	mg/l
	report	report	50 mg	report	15 mg	report	6-9 s.u	report
DATE								
Sep-07	no discharge							
Aug-07	no discharge							
Jul-07	no discharge							
Jun-07	no discharge							
May-07	no discharge							
Apr-07	no discharge							
Mar-07	no discharge							
Feb-07	no discharge							
Jan-07	no discharge							
Dec-06	no discharge							
Nov-06	no discharge							
Oct-06	no discharge							
Sep-06	no discharge							
Aug-06	no discharge							
Jul-06	no discharge							
Jun-06	no discharge							
May-06	no discharge							
Apr-06	no discharge							
Mar-06	no discharge							
Feb-06	no discharge							
Jan-06	no discharge							

MEMORANDUM

TO: Angela Marse

FROM: Brian Baker

DATE: February 11, 2008

RE: Stream Flow and Water Quality Characteristics for Natalbany, receiving water for Tangipahoa Parish Landfill (Permit No. LA0078921, AI: 43470)

Determinations of water quality characteristics for the outfall was taken from a random sampling site 3.8 miles SW of Amite, upstream of Tangipahoa Parish Landfill.

From 2 observations in TSS and 2 observations for hardness the following results were obtained:

Average hardness	=	20 .4 mg/l
15^{th} percentile TSS	=	8.6 mg/l

Discharge is to the Natalbany River north of the USGS gage near Baptist. Using a discharge area ratio and the USGS station 7Q10, the 7Q10 for the discharge site was determined to be about 1.44 CFS.

Based on the HMF for the USGS gaging station at Baptist and the drainage area ratio between the two locations, the harmonic mean flow for the outfall location is estimated to be about 9.34 CFS.

If you have any questions or comments, please contact me at 2-3466.

BMB;bmb

BIOMONITORING FREQUENCY RECOMMENDATION AND RATIONALE FOR ADDITIONAL REQUIREMENTS

Permit Number: **LA0078921**
Facility Name: **Tangipahoa Regional Solid Waste Facility**
Previous Critical Biomonitoring Dilution: **5.2%**
Proposed Critical Biomonitoring Dilution:
Outfall 001: 7%
Outfall 301: 19%
Date of Review: **02/11/08** Name of Reviewer: **Laura Keen**

Recommended Frequency by Species:

***Pimephales promelas* (Fathead minnow): Once / Quarter[1]**
***Ceriodaphnia dubia* (water flea): Once / Quarter[1]**

Recommended Dilution Series:
Outfall 001: 3%, 4%, 5%, 7%, and 9%
Outfall 301: 8%, 11%, 14%, 19%, and 26%

Number of Tests Performed during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow): 5[2]**
***Daphnia pulex* (water flea): 1[2]**
***Daphnia magna* (water flea): N/A – Testing of species was not required**
***Ceriodaphnia dubia* (water flea): 4[2]**

Number of Failed Tests during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow): 0[2]**
***Daphnia pulex* (water flea): N/A – Testing of species was not required**
***Daphnia magna* (water flea): N/A – Testing of species was not required**
***Ceriodaphnia dubia* (water flea): 0[2]**

Failed Test Dates during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow): No failures on file during the past five years[2]**
***Daphnia pulex* (water flea): N/A – Testing of species was not required**
***Daphnia magna* (water flea): N/A – Testing of species was not required**
***Ceriodaphnia dubia* (water flea): No failures on file during the past five years[2]**

[1] Due to insufficient testing data on file, the biomonitoring testing frequency shall remain once per quarter for *Ceriodaphnia dubia* and *Pimephales promelas* for the life of the permit

[2] At the time of this recommendation, LDEQ Biomonitoring staff noted that there are only five biomonitoring tests on file from the past five years. This matter will be referred to LDEQ Enforcement for further review.

Previous TRE Activities: **N/A – No previous TRE Activities**

Additional Requirements (including WET Limits) Rationale / Comments Concerning Permitting:

Tangipahoa Regional Solid Waste Facility owns and operates an existing municipal solid waste landfill serving Tangipahoa Parish and the area within a 100 mile radius in Amite, Tangipahoa Parish, Louisiana. LPDES Permit LA0078921, effective January 1, 2005, contained chronic freshwater biomonitoring for Outfall 001.

It is recommended that freshwater chronic biomonitoring be an effluent characteristic of Outfall 001 (discharge of 0.076mgd) and Outfall 301 (discharge of 0.246mgd of treated landfill wastewater and stormwater) in LA0078921. The effluent dilution series shall be as follows:

Outfall 001: 3%, 4%, 5%, 7%, and 9% concentrations, with 7% being defined as the critical dilution.

Outfall 301: 8%, 11%, 14%, 19%, and 26% concentrations, with 19% being defined as the critical dilution.

The biomonitoring frequency for each Outfall shall be once per quarter for *Ceriodaphnia dubia* and *Pimephales promelas* for the life of the permit.

This recommendation is in accordance with the LDEQ/OES Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies (Revised June 30, 2000), and the Best Professional Judgement (BPJ) of the reviewer.